

WHAT IS CLAIMED:

1. (Currently Amended) A method for a mobile agent object to dynamically extend its capabilities, the method comprising:

executing the mobile agent object in a mobile-agent runtime environment in a host computing environment, the mobile agent object operable to execute in a first electronic device, halt execution in the first electronic device at an execution state, be transplanted to a second electronic device, and resume execution from the execution state in the second electronic device;
and

configuring the mobile agent object to install a service object executable in the mobile-agent runtime environment.

2. (Currently Amended) A method, comprising:

accessing, with a first host computing environment, a second host computing environment having a mobile-agent runtime environment; and

generating in the first host computing environment a first mobile-agent object operable to navigate to the second host computing environment and install a service object executable in the mobile-agent runtime environment and that may be called by any process or subsequent mobile-agent object that is executing in the mobile-agent runtime environment, the mobile agent object operable to execute in a first electronic device, halt execution in the first host computing environment at an execution state, be transplanted to a second host computing environment, and resume execution from the execution state in the second host computing environment.

3. (Previously Presented) The method of claim 2 wherein the first mobile-agent object is further operable to discover available services associated with the mobile-agent runtime environment.

4. (Previously Presented) The method of claim 2, further comprising generating in the first host computing environment a second mobile-agent object operable to navigate to the second host computing environment, discover available services associated with the mobile-agent runtime environment, and provide to the first host computing environment information associated with the available services.

5. (Previously Presented) The method of claim 2 wherein the first mobile-agent object includes the service object.

6. (Previously Presented) The method of claim 2 wherein the first mobile-agent object includes at least one service module operable to realize a function of the service object.

7. (Currently Amended) A computer-readable medium having stored thereon a data structure, comprising:

a first instruction set that when executed by a computing device causes the data structure to navigate from a first host computing environment to a second host computing environment having a mobile-agent runtime environment; and

a second instruction set that when executed by a computing device causes the installation of a service object executable in the mobile-agent runtime environment and that may be called by any process or subsequent mobile-agent object that is executing in the mobile-agent runtime environment.

8. (Previously Presented) The medium of claim 7 wherein the data structure further comprises at least one service module operable to realize a function of the service object and executable in the mobile-agent runtime environment.

9. (Previously Presented) The medium of claim 8 wherein the second instruction set, when executed, further causes the installation of the at least one service module in the mobile-agent runtime environment.

10. (Previously Presented) The medium of claim 7 wherein the data structure further comprises the service object.

11. (Previously Presented) The medium of claim 7 wherein the data structure further comprises a runtime-data set associated with the service object.

12. (Previously Presented) The medium of claim 7 wherein the data structure further comprises a third instruction set that when executed enables the use of an API associated with the second host computing environment.

13. (Previously Presented) A computer-readable medium having stored thereon instructions that when executed by a computing device perform the method of claim 2.

14. (Previously Presented) A method of transferring the instructions of claim 13 from at least one first computer to at least one second computer connected to the at least one first computer through a communication medium, the method comprising the steps of:

- (a) accessing, on the at least one first computer, the instructions; and
- (b) transferring the instructions from the at least one first computer to the at least one second computer through the communications medium.